



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Notes on the Models Exhibited at the Meeting November 19, 1880. By J. P. Lesley.

These models were made by and under the superintendence of Mr. Ed. B. Harden, Topographical Assistant of the Second Geological Survey of Pennsylvania, and form part of a collection of models in the Museum of the Survey, No. 907 Walnut street, Philadelphia.

Each is constructed on one and the same vertical and horizontal scale to avoid structural distortion; but the scale of the first is 1 mile : 1''; that of the second 1600' : 1''; and that of the third 800' : 1''.

The model of the Seven Mountains represents a district of anticlinals and synclinals, forty miles long, extending along the north side of the Kishicoquillas valley in Centre and Union counties. Parallel anticlinal ranges of Medina and Oneida, dying down eastward into Union, and westward into Huntingdon counties, form a mountain belt between the Siluro-Cambrian lowlands of Kishicoquillas valley in Mifflin and Snyder counties in the south, and Pine Creek, Brush and Nittany valleys of Clinton and Centre counties on the north. The broad rounded spurs sinking with the axis of each anticlinal beneath the Clinton red shale and fossil iron ore beds, are finely shown. In the heart of the region the anticlinal mountains split open, and show long narrow deep vales of Hudson river slate, while the synclinals contain long narrow strips of Clinton red shale.

In two places occur diagonal upthrow faults on a large scale, one through the Stone Mountain at Greenwood furnace; the other (in a prolongation of the line of the first fault), some miles further to the north-east.

Both faults have the western portion thrown northward and backward towards the north-east, as in a diagonally splintered arm bone drawn together by the contraction of the muscles; and this structure is plainly exhibited by the termination against each side of each fault of the Medina mountain crest, and of the Oneida terrace which always accompanies it.

The model of the Stone Mountain fault shows the structure on a large scale, and especially the slight curves at the ends of the hypothetical straight line of the fault, as well as the crushed and packed-in condition of the red shales around the north-east end of the fault. In the case of the other fault, there is a much greater complication; for two cross faults, at the two ends of the main slide line, parallel to each other, must be imagined to satisfy all the surface conditions.

The model of the Mammoth bed floor in the Schuylkill county is the first of this kind constructed in the Anthracite region. There is a model of the same kind in the Museum of the Towne School of the University of Pennsylvania, showing the floor of the Pittsburgh coal bed in Somerset county, Pennsylvania, which I had made by my students from data obtained by a special survey ordered by the Board of Commissioners of the Geological Survey in 1875. But the Anthracite basins are deep, steep sided, and with their separating anticlinals sometimes overthrown towards the north and collapsed. These are the most striking features of this model.

It also exhibits for the first time another unexpected and very important

feature, viz: the kettle-shaped isolation of the subordinate synclinals, which ride upon the crests of anticlinals at their ends. In fact, the views which we have hitherto held of the general continuance and parallelism of the sub-basins receives here a rude shock. The greatest irregularity prevails in the arrangement of the mutually interlocking sub-anticlinals and sub-synclinals. At the same time it is most interesting and satisfactory to see that in this respect the dimpled structure of the broad and shallow bituminous basins is reproduced in the narrow and deep anthracite basins.

The crushing, sidewise thrusting action from the south against the Anthracite coal region is admirably illustrated by this model, which is only the first of a series, to be extended lengthwise of the Mahanoy and Shamokin field as the Geological Survey advances.

Stated Meeting, December 3, 1880.

Present, 19 members.

President, Mr. FRALEY, in the Chair.

Letters of envoy were received from the Royal Observatory, Greenwich, Dec. 1880; and the Board of Commissioners of the 2d Geological Survey of Penna., Harrisburg, Nov. 25, 1880.

Donations for the Library were received from the R. Accademia dei Lincei, Rome; Zoologischer Anzeiger, Leipzig; Geographical Society, Annales des Mines, and Revue Politique, Paris; Society of Commercial Geography, Bordeaux; R. Astronomical Society, and Nature, London; American Academy of Medicine, and Editors of the International Review, New York; Academy of Natural Sciences, Medical News, Engineers' Club, Journal of Pharmacy, and Geo. Hamilton, M. D., Phila.; and the Board of Commissioners of the 2d Geological Survey of Pennsylvania.

A letter from Mrs. Haldeman, enquiring about the memoir and relics for illustration by the late Prof. Haldeman was read, and on motion it was

Resolved, That the Curators be authorized to deposit the cards on which these relics are arranged, in the Museum of the Academy of Natural Sciences, and to take a receipt for the same, as in the case of other curiosities belonging to this Society there deposited.